

ABSTRACT OF THE DISCLOSURE

It is an object to provide a transmitter capable of carrying out a highly efficient polar coordinate modulation while maintaining an excellent distortion characteristic.

In the case in which a high power amplifier 13 is operated in a saturation mode to carry out a polar coordinate modulation, a switching control signal to be input to a multiplication/division switching terminal 33 is set to be a multiplication, and a quadrature modulating digital signal input from an I input terminal 31 and a Q input terminal 32 and distortion data of a compensation table 16 are multiplied in a distortion compensating portion 17, thereby adding a nonlinear distortion which is equivalent to that in use of the high power amplifier 13 in a linear mode and compressing a peak factor of a modulating signal to enhance an efficiency of the polar coordinate modulation. In the case in which the high power amplifier 13 is operated in the linear mode to carry out a linear amplification, the switching control signal is set to be a division and the quadrature modulating digital signal and the distortion data are divided in the distortion compensating portion 17, thereby adding a reverse

distortion characteristic of the high power amplifier 13 to carry out a nonlinear distortion compensation of the high power amplifier 13.